Meeting of the Decommissioning Project Community Workgroup (#31)
Tuesday, June 19, 2007
Huron Public Library

The meeting began at 7 p.m. The following Workgroup members were present: Anne Hinton, Bob Speers, Rick Myosky, Ralph Roshong, Dave Stein, Sharon Schaeffer and Bill Ommert. Representing NASA were Program Manager Keith Peecook, Project Environmental Manager Peter Kolb and NASA Glenn Public Affairs Specialist Sally Harrington. Susan Santos and Michael Morgan of FOCUS GROUP were present as were. Bob and Ruth Haag of Haag Environmental, and 10 members of the public.

Opening Remarks

Keith Peecook welcomed everyone to the meeting, noting that it was the 31st that NASA has held. Susan Santos asked for and received acceptance of the January 30, 2007 Workgroup meeting minutes, then reviewed the June meeting agenda.

Project Update

Keith reported that NASA had completed decontamination work on all seven Hot Cells, where reactor experiments has been analyzed when the reactor was operational. H noted that post-remediation surveys showed NASA had been successful in cleaning the cells to below the Derived Concentration Guidelines, an essential step in successfully completing decommissioning and terminating NASA's license with the US Nuclear Regulatory Commission (NRC). He said workers from subcontractor MOTA Corp. had successfully removed and decontaminated concrete slabs that had comprised the cells' roof, and the walls between the cells, to "free release" levels, such that they can be recycled as scrap concrete. This effort saved NASA the cost of sending some 500,000 pounds of concrete and 100,000 pounds of steel to a licensed disposal facility as low-level radioactive waste (LLRW). During this presentation, Keith showed several slides of Hot Cells work and said embedded piping and conduits in the cells had also been cleaned and surveyed, meeting cleanup levels.

Keith said the successful cleanup of the Hot Cells had provided a path forward for similar decontamination work in several other areas of the Reactor Facility, including the Fan House basement, the Hot Pipe Tunnel and the "Warm Room" of the Hot Lab (an area located behind the cells) and the Evaporator Pit area of the Waste Handling Building. He showed slides of "before and after" work in each building and talked about the use of a machine known as a Marcrist floor shaver, which removes contaminated concrete a quarter-inch at a time, and the Brok, a larger, track mounted machine on which a large shaver head had been mounted to remove larger amounts of concrete. He reported that workers had successfully completed decontamination of the first 50 feet of the 250-foot Hot Pipe Tunnel with the removal of just one quarter-inch of concrete before meeting cleanup levels.

Embedded Piping

Work continues on the decontamination and surveying of embedded piping, pipe systems encased in concrete and as much as 46 feet below ground, with Keith noting that some 18,000 feet had been cleaned and surveyed, out of a total of about 20,000 feet. He said subcontractor BSI had also cleaned piping in the outdoor WEMS Pit, large concrete structure that had once been used to regulate permitted water discharges from the reactor, never allowing any water to be released if its radiation content exceeded ten percent of the discharge limits. On the few occasions when water exceeded the ten percent limit, it was redirected to the Emergency Retention Basin, a large outdoor structure in which the water was held until the radiation it contained decayed to acceptable discharge limits. Here workers from subcontractor BSI cleaned drain line pipes that ran into the WEMS Pit from culverts running under Pentolite Road. Keith also said the WEMS Pit was like "a 15-foot swimming pool that we hadn't done anything with for 30 years. It had three feet of muck that had to be removed." The walls were cleaned with a pressure washer and the pit cleaned to cleanup levels.

Keith said NASA had put together six characterization packages for the embedded piping and sent them to the NRC Region II office in Lisle, IL. He added that Region II staff would be visiting PBRF the week of June 25 and if the NRC approves the packages, he would have embedded piping grouted (filled with a concrete mixture, a 6-8 week process) this summer. He said grouting will help keep the pipes in place and avoid any corrosion, adding that another 250 feet of pipe that could not be cleaned to DCGL's (due to corrosion) would be grouted and then "cut out and removed" for shipment as LLRW.

Characterization/Final Status Survey

Keith said recent characterization efforts have focused on off-site contamination near Plum Brook, noting that hydrogeologist Bob Haag would give a presentation on this progress later in the evening. He reported that the revised Final Status Survey (FSS) Plan that NASA sent to the NRC in May 2006 "has been all but approved" and was currently undergoing review by the NRC legal staff. Once there has been legal signoff, he said the plan would be posted in the Federal Register for a 30-day public comment period. He also said that two Reactor Facility buildings - the Reactor Office and Laboratory (ROLB) and the Service Equipment Building (SEB) - had been prepared for FSS review and placed off-limits to anyone not working on the FSS. In addition, he said BSI has put together FSS packages and drafted maps of the ROLB, and is in the process of doing so in the SEB, using a computer assisted design system. He termed these maps "the pedigree that you have to show the NRC" when seeking FSS approval.

Cadmium-Containing Control Rods

Keith briefly discussed the status of the cadmium-containing control rods, which have been kept in temporary cask storage at Plum Brook Station since their removal from the Hot Lab. Keith said that the rods consist of about 600 pounds of metal and have about 60 curies of radiation, noting that the six shipments to the Barnwell licensed disposal

facility (in South Carolina) during segmentation had a content of about 10,000 curies. But because these rods contained cadmium, they could not be sent to Barnwell, and because they contained radiation in excess of Class A levels, they could not be sent to the Energy Solutions facility (in Utah). He reported that NASA had issued a Request for Proposals but that there were data problems with the proposals submitted by contractors, with one who felt the rods would have to be transported in a Type A cask; another who said a Type B cask was needed. As a result, he said NASA reissued an RFP and decided on a contractor - Waste Management Group - which had conducted all the characterization of the Class B and C wastes for the Barnwell shipments.

Keith said that NASA "now has a pathway" for disposal, and that the rods will be shipped for permanent disposal at the US Department of Energy's Nevada Test Site this summer. He promised that local emergency responders - including Bill Ommert, Emergency Management Agency for Huron County and Bill Walker, Emergency Management Agency Director for Erie County (both Workgroup members) - would be given advance notice of the shipment. Bill Ommert asked what kind of cask would be used, with Keith responding that it would be a Class A, cask placed on a truck and then driven to the Nevada Test Site. He also said he would let the Workgroup know right after the rods were shipped, in addition to updating the telephone information line with news of the shipment.

Decontamination and Shipping Contract

Keith then talked about the Decontamination and Shipping Contract (formerly called the "Completion Contract"), which he said would accomplish all of the remaining major tasks. These include: completing all decontamination work; preparing all remaining PBRF sites for the FSS; excavating and sampling more than 50 million pounds of soil and properly disposing of all waste material. He said NASA had attended the nuclear industry's Waste Management Conference, held in Tuczon, AZ in February, where an "Industry Day" was held. There, NASA made a presentation on the draft Statement of Work, describing the tasks to be performed under the contract, which was attended by 39 prospective bidders. He also said 15 contractors had participated in "one on one sessions" with NASA personnel.

Keith reported that NASA had received "great feedback" from the contractors and was preparing to issue a draft Request for Proposals, intended for release in June. But he said NASA headquarters had commissioned an Independent Cost Estimate for completion of the Decommissioning Project, being undertaken by TLG Services. He said the contractor had issued an interim report on June 1 with the final due the end of the month. Keith said TLG has not only looked at cost and scheduling but also "the project's management setup." Keith said he agreed with some of TLG's recommendations and disagreed with some others, noting they would require changes in the RFP; but he was pleased that the contractor agreed with NASA's approach to decontaminating and demolishing buildings, rather than the "rip and ship" approach. The latter is an approach NASA had previously evaluated - and would have had NASA regard all buildings and materials as LLRW - resulting in increased shipping and disposal costs.

The bottom line, Keith said, was that NASA would delay issuing an RFP until probably mid-August. But he stressed that the delay "is not going to stop me from getting work done," noting that decontamination work would continue throughout the summer. He observed, however, that subcontractor MOTA Corp. had been performing this work under a contract with the U.S. Army Corps of Engineers, which is no longer on the project and that the contract is expiring. He said it would mean that another RFP would have to be issued if work were to continue this fall.

The Next Few Months

Keith said that over the next few months, NASA would continue with decontamination activities, dispose of the cadmium-containing control rods and grout the cleaned and surveyed piping under Reactor Facility buildings, and continue to prepare FSS packages for the NRC. He also said that if procurement issues could be worked out, the remediation of Pentolite Ditch would begin.

Keith the showed meeting attendees a CD of a "virtual tour" of Reactor Facility buildings that had been given to prospective bidders, adding that he would make copies available to Workgroup members once the bidding process was completed. He showed several PBRF buildings where work had been done, including the Reactor Building, explaining "You can pull up the Reactor Building…People can see how flaky the paint was there. They can see the access, through the truck door, to the Containment Vessel," (where the reactor was formerly located). He showed a series of photos inside the Reactor Building that were taken in February and noted that some work in progress - such as the Hot Lab Building cleanup - "would be taken off the scope of work," in the final contract.

Off-site Characterization Efforts

Bob Haag of Haag Environmental gave the Workgroup a presentation on off-site characterization efforts conducted near Plum Brook. Bob began by recalling that, at the January Workgroup meeting that "We had concluded that there was no cesium in East Sandusky Bay," above levels that had resulted from desert atom bomb testing in the 1950's. He said "This conclusion remains true." He then showed several slides of areas where Haag Enviro has conducted additional sampling in recent months, including some wells on-site at Plum Brook Station (PBS), ponds located on Plum Brook Country Club land and the stream mouth at Plum Brook. He noted that the wells at PBS have very low levels of cesium and consistent with earlier sampling, Bob said that most samples were three picocuries per gram or less, adding that there have been occasional elevated readings - almost all of which were below the proposed NASA cleanup level (known as Derived Concentration Guidelines, or DCGL's) of 12 picocuries per gram. He added that his company had recently been conducting what is termed "bounded sampling" examining the bounds of some isolated areas where elevated levels had been found (which posed no health or safety concerns).

Bob noted that groundwater wells had shown very low levels of cesium in sediment at the bottom of the wells but said "We have determined that some surface sediment had entered these wells from the top, carrying cesium from the ground surface near the (groundwater) wells." He then discussed "stream meander" areas, which had been sampled by NASA last year and then evaluated by Haag Enviro. He explained that the Plum Brook stream is "constantly eroding and re-depositing" sediment downstream. He said, "Every time we sample a deposit and test for cesium, we find many, many low results and a few elevated results," adding that "If we go back to sample the same deposit, we can expect to find the same pattern of many lows and a few highs," but pointed out that "we expect the locations of those few highs to change." Bob termed this pattern of results within each deposit as a "log-normal distribution," and that such "patterns of stream meander results become clear only after the results have been converted to logarithms." He also said there trend that shows the most elevated results occurring near culverts, which have a ponding effect on the water. He said additional bounded samples of meander deposits would be taken.

Bob discussed sampling that had been conducted in area ponds, including three on Plum Brook Country Club property and one near Stream Mouth of Plum Brook. He said all cesium levels found were well below the DCGL's of 12 picocuries per gram and also pointed out that the pond near the Stream Mouth, where "peak cesium activity" was found to be at a depth of five feet below the bottom of the water. There he said the five feet of water and the "clean cover…provides protective shielding." He also said the highest level of cesium found near the pond was 7.7 picocuries, well below the DCGL.

Bob also talked about an area known as the Flood Plain Wetland, where there had been a value of 10.3 picocuries per gram in the top six inches of the flood plain soil, and one with a value of 14.2 picocuries in the top six inches of the stream bottom. He noted that the 10.3 value was less than the DCGL and the 14.2 value was found under water, and that "the water provides shielding that would protect a person standing there." Bob summarized the sampling effort by observing that NASA had taken over 2,000 samples and the vast majority were well below the DCGL of 12 picocuries per gram. Noting that the "highest values" were found under sediment or covered by water, he said NASA had to consider whether the harm in digging up soil and sediment in isolated areas "was greater than the benefit of a cleanup." He added that "To the extent that it is reasonable and practical…we have generally characterized the vertical and lateral extent of cesium that has traveled off site from the PBRF. Most cesium concentrations were less than the DCGL's." He added that, in the few instances where levels were higher, "There are mitigating factors we feel make it acceptable and prudent leave the cesium where it is."

Workgroup member Bob Speers, a physics professor, asked whether NASA had consulted with any biologists during the sampling, and explained that "Biologists have insights that other folks don't have." Keith said he had talked with Erie MetroParks Director Jon Granville (a former and founding Workgroup member) and had asked about sampling fish in the area. Keith added that he would ask about any biologists with whom MetroParks might work. Bob also asked how cesium bio-accumulated and Workgroup member Bill Ommert asked about the input of a marine biologist. To both questions,

Keith responded that he would conduct follow-up. He added that he would also ask about "any pathways that we have not considered."

Community Relations Update

Sally Harrington noted that the June edition of the *Decommissioning News* had been mailed to 2,300 recipients on the project mailing list. She also reported that David Stringer, a retired U.S. Air Force General, was now the Chief of the NASA Plum Brook Station Management Office. She hoped David would be present at the annual Decommissioning Community Information Session (CIS), which will take place at Sandusky High School on Wednesday, October 17, from 7 p.m. to 9 p.m. She also said that Tom Hartline had been named as Director of Safety and Mission Assurance at NASA Glenn, filling the vacancy left when Vernon "Bill" Wessel was promoted to Associate Director at NASA Glenn.

Sally reported that the NASA PBS Space Power Facility had undergone a rededication on June 11 which included "lots of stakeholders…people instrumental in helping NASA Glenn and Plum Brook to get this work." They included U.S. Senator George Voinovich (R-OH) and U.S. Representatives Marcy Kaptur and Dennis Kucinch (both D-OH). She said the facility will be used to test the fully assembled Orion spacecraft and the facility manager, Jerry Carek, may also be at the CIS in October along with an Orion display. Sally added that a team of students from the EHOVE Career Center in Milan, known as the Mavericks, had performed well at a national Robtics competition in April and hoped they would also be present at the CIS. She thought the presence of the Mavericks would be instrumental in drawing EHOVE students to the CIS. Susan Santos added that "Decommissioning is always the focus" of the CIS and that this year will include the Virtual Tour discussed at the Workgroup meeting; but that "we like to change the flavor" of the event by featuring other NASA Glenn/PBS activities as well.

Finally, Sally reported that NASA would prepare a fact sheet on the off-site sampling results that would be published this fall, and there would also be an October newsletter, to be published and mailed about a week before the Workgroup meeting and CIS.

Next Workgroup Meeting

NASA will hold both a Workgroup meeting (with an early start time of 5:30 p.m.) and the annual Community Information Session (CIS), on Wednesday October 17. There will be a light supper for Workgroup and NASA Team members starting at 5 p.m. The meeting topics will include a Decommissioning Update and a report on Environmental Sampling at PBS. She noted that the meeting will be shorter than normal to accommodate the CIS starting time of 7 p.m.

The meeting adjourned at 8:35 p.m.